

ABSTRACT

A fuel injector, in particular an injector for fuel injection systems of internal combustion engines, may include a piezoelectric or magnetostrictive actuator, which, via an hydraulic coupler, actuates a valve-closure member formed on a valve needle, the valve-closure member cooperating with a valve-seat surface to form a sealing seat. The hydraulic coupler may have a master piston and a slave piston. A coupler gap formed between the master piston and the slave piston may be dimensioned such that it is closed in the cold state of the fuel injector and opens by a temperature-related linear deformation of the actuator as the temperature of the fuel injector increases.